

ABSTRACT

Bus transactions in a computer network are improved by utilizing a multicast transaction from a single initiator to multiple targets. The multiple targets simultaneously execute the transaction and provide a return transaction to the initiator. The transaction cycle time is reduced as individual request to each target is replaced with a single request to a collective target group, addressable by a single base memory address. Interleaved read or write operation is provided to allow the multiple targets of a particular target group to independently execute a portion of the transaction request. Improved bus performance is achieved by utilizing the higher throughput capacity of the system bus providing a higher number of shorter data segments from each target executing its portion of the larger transaction.